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Vegetables

Rhubarb in Home Gardens

R. Allen Straw, Assistant Professor, Plant Sciences
Originally prepared by Alvin Rutledge and David W. Sams, Professors Emeriti, Plant and Soil Science

The rhubarb or pie plant (*Rheum rhaponticum*) belongs to the *Polygonaceae* or buckwheat family. The plant is a herbaceous perennial with leaves growing directly from the crown. The leaf petioles or stalks are used in making pies, sauces and various tart food items. The leaf blades contain considerable soluble oxalic acid and are poisonous to humans. Less oxalic acid is present in the petioles. The lower concentration and the decreased solubility of the oxalic acid in the petioles make them edible for human beings.

Nutritionally, rhubarb provides appreciable amounts of Vitamins A and C. It also contains moderate levels of calcium and potassium. It is low in fats and carbohydrates but very acid. Its acidity requires the addition of considerable sugar, which greatly adds to the caloric content of ready-to-eat products made from rhubarb.

Climate

Rhubarb, native to Siberia, grows more vigorously and lives longer where summers are cool and moist and the soil freezes deeply during the winter. In Tennessee, winters are mild and summers are hot and occasionally very dry. Tennessee winters do not always satisfy the cold requirements of the rhubarb plant.

Rhubarb plants grown in Tennessee continue to develop new leaves until the weather turns hot and the soil becomes dry, then the leaves die and the plants go dormant. While in summer dormancy, rhubarb is very susceptible to *Phytophthora* crown rot and frequently dies. If it survives the summer, it may revive in the fall and grow until the leaves are killed by the first hard freeze. Because of the hot, dry summers in Tennessee, a rhubarb plant may be short lived. This is especially true in West Tennessee.

Location

Because the Tennessee climate is borderline for rhubarb production, it is extremely important to pick the best site available. Locate plantings on north-facing slopes whenever possible. North-facing slopes are cooler during the summer. Partial shade on the south or southwest side is also helpful. Heavy shade should be avoided since the vigor of the plant and the diameter of the leaf petioles decrease as shade increases. Since rhubarb is a perennial, be sure to plant it where it can remain undisturbed for several years.

Soil

Soil for growing rhubarb must be well drained. It should also be deep, nutrient-rich and moist. Avoid

soils that are high in clay. Rhubarb responds best to medium-textured soils high in organic matter. Rhubarb is not particular as to soil pH and does well at a pH of 5.5 to 6.5.

Varieties

Some of the more common varieties include Canada Red, Cherry Red, Crimson Red, McDonald, Valentine and Victoria. Except for Victoria, all of these varieties produce leaf petioles that are generally red in color. Victoria produces leafstalks varying from green to slightly pinkish in color that are very tart.

Planting and Spacing

Prior to planting rhubarb, work the soil to a depth of at least 1 foot. The addition of one third peat moss, compost, manure or other organic material to the worked soil before planting rhubarb will be well rewarded by more vigorous growth in future years.

Plant dormant, disease-free crowns having two or more buds in February or March. Space rhubarb plants 3 to 4 feet apart in each direction or 3 to 4 feet apart in the row and 4 to 5 feet between rows. Cover the crowns with about 1 inch of soil. Rhubarb has very thick, fleshy roots that spread wider and grow deeper than the size of the leafy portion of the plant.

A second option is to start rhubarb plants from seed. Several seed companies carry seed of the Victoria variety. Plant rhubarb seed individually in 4-inch pots in February or early March. Grow the seedlings under cool conditions — similar to the way you would grow broccoli or cabbage. Set the seedlings in the garden as you would crowns when they are 4 to 6 weeks old. Mulch the newly set seedlings to control weeds, retain moisture and reduce soil temperatures. Maintain adequate soil moisture with irrigation as needed.

Fertilizer and Lime

Apply fertilizer and lime before planting according to the results of a soil test recommendation. In the absence of a soil test recommendation, apply 20 to 25 pounds of a complete fertilizer such as 13-13-13 per 1,000 square feet of planting area. Work it into the planting area before setting crowns.

Sidedress rhubarb with 2 to 3 inches of compost or manure and 2 pounds of ammonium nitrate per 1,000 square feet after harvest to increase vigor. If compost or manure is unavailable, you may use grass clippings, leaves, straw or any organic mulch.

Apply fertilizer in amounts similar to those above every year. Apply it in the late winter or early spring, just prior to plant growth. Do not attempt to work fertilizer into the soil, as any disturbance of rhubarb roots risks decay. Additional lime will generally not be required.

Irrigation

Water supplied during periods of drought will delay, and may prevent, summer dormancy. This will allow stronger, more productive crowns to develop. A drip or trickle tube 18 inches from the crowns will supply the plants with needed water without soaking the crowns and increasing chances of crown rot. Run the drip system for an hour or two whenever the leaves begin to wilt.

Winter Mulch

Mulch rhubarb with 6 inches of straw after the soil is frozen or after a prolonged cold spell. The light color will reflect sunlight and keep the soil cool. Reducing soil temperature should reduce crown rot. Do not use dark-colored organic mulches or black plastic, as these will warm the soil and may cause the plants to break dormancy too early. Pull winter mulches off the crowns before they begin to grow in the spring. Leave the mulch around the plants to control weeds, as well as to keep the root zone as cool as possible.

Diseases

Crown rot is the major rhubarb disease in Tennessee. The primary cause of crown rot is *Phytophthora*. However, crown rot can also be caused by *Pythium, Rhizoctonia* or *Botrytis*. The pathogens cause lesions at the base of the petioles, followed by collapse of the leaf and death of the crown.

Crown rot is common in West Tennessee or on any fine-textured, poorly drained soil. At present, there are no labeled chemical controls for crown rot. Remove plants affected with crown rot and destroy them. Do not replant rhubarb where plants have been infected with crown rot.

Insects

Few insects affect rhubarb, but the rhubarb curculio can be a problem. The curculio is a yellowish or rust-colored snout beetle that bores holes in the petioles and crowns. The larva feed on curly dock. Therefore, do not allow curly dock to grow near rhubarb.

Snails and slugs can become a problem under the organic mulch surrounding the plants. If slugs become a problem, baits can be used to control them.

Weed Control

Weeds are not likely to be a severe problem around rhubarb because of the heavy mulches used in its culture. Pull weeds in the spring before rhubarb makes significant growth. Do not cultivate near rhubarb, as damaged roots are very susceptible to disease and decay. Use organic mulches and hand pulling to control weed growth.

Seed Stalk Formation

Vigorous rhubarb plants are likely to produce seed stalks during the early spring and on into summer. These use energy reserves that should go into development of larger crowns. Remove seed stalks by pulling or cutting them from the plant as soon as their presence is noticed.

Crown Division

Rhubarb plants may remain productive for many years. However, after five or more years so many growing points have developed that the diameter of the leaf petioles decreases due to crowding. If this occurs, carefully dig the plants and divide them into pieces, with each having only two or three buds. This must be done very early in the spring before the plants begin to grow.

Harvesting

When beginning with crowns, do not harvest any rhubarb in the year you plant the roots. Harvest no more than three times the second year and three to five times each year thereafter. Seedling rhubarb may be lightly harvested once the first year and then treated as though it had been planted from crowns. A single, mature rhubarb plant can produce two to six pounds of leaf petioles a year.

Use a slow, careful, sideways twist to free the leaf petioles from the crowns when they reach their full size. This will be after the young, crinkly-looking rhubarb leaf has smoothed out. Carelessly pulling rhubarb can seriously damage the crown. Do not cut rhubarb from the plant with a knife, since the wound remaining will be more susceptible to crown rot. Do not remove more than two thirds of the developed leaf petioles at one time. Be sure to remove and discard the entire toxic leaf blade before cooking and/or eating. The sooner after harvest the leaf blades are removed, the less the edible petioles will wilt.

Forcing Rhubarb

Where winters are long and cool enough, rhubarb crowns can be dug and forced indoors for winter production. Use only vigorous plants 2 years old or older for forcing. Dig crowns after they go dormant and place them in large wooden boxes or other suitable containers. Barely cover them with moist peat moss, sawdust or sand. Allow the plants to remain in the garden for at least six weeks after the average daily temperature is 40 degrees or below. Then move the plants to a dark area that will remain between 50 and 70 degrees, such as a basement. Keep the crowns moist and they will produce rhubarb petioles in three to six weeks. Light is not required for forcing rhubarb, as leaf development is undesirable. Discard the plants after they have been used for forcing.

Storage

If you have more rhubarb than you can use at one time, simply chop it into small pieces, place it in a plastic bag and freeze it for later use.

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